Microfracture for Osteochondral Lesions of the Ankle: Outcome Analysis and Outcome Predictors of 105 Cases

Reference:

Scientific Literature Review

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Podiatric Relevance:
This study proposes to identify outcomes and outcome predictors of arthroscopic debridement with osteochondral bone stimulation/microfracture for osteochondral lesions of the ankle. This treatment is often used by podiatrists for minimally invasive treatment of ankle osteochondral lesions and ankle pain. This paper helps the surgeon select proper patient cohorts for this procedure yielding the best possible outcomes.

Methods:
This prospective study included one hundred five consecutive patients with osteochondral lesions of the ankle who underwent ankle arthroscopy with microfracture. Patients were followed for a mean of 31.6 months. Follow-up evaluations were performed at 6 weeks, 3 months, 6 months, 12 months, and yearly after surgery. Patients were assessed using the visual analog scale for pain during daily and sport activities, the Roles and Maudsley score, and the American Orthopaedic Foot and Ankle Society ankle and hindfoot scoring system were obtained at each visit. A logistic regression model was used to analyze the outcome predictors.

Results:
The study group consisted of 73 men and 32 women with a mean age of 40.5, a mean BMI of 24, and mean duration of symptoms before surgery of 12.9 months. The authors reported no failures treating lesions less than 15mm and successful treatment of only one lesion greater than 15mm based on their set criteria for success. Their statistical analysis suggested that increasing age, higher BMI, history of trauma, and presence of osteophytes yielded a negative effect on outcomes. In contrast, the presence of instability and anterolateral soft-tissue scar had a positive effect on outcome.

Conclusions:
The authors reported a strong correlation between lesion size and success in treatment across its population. Lesions less than 15mm in size yielded excellent results regardless of location, and the opposite for lesions greater than 15mm. Increasing age, higher BMI, trauma, and the presence of osteophytes negatively affected outcome, while ankle instability and anterolateral soft-tissue scar correlated with a positive outcome. Further research comparing other treatment modalities for larger lesions is needed before a single treatment can be definitively recommended.